



SEQUENCE LISTING

(1) GENERAL INFORMATION:

(i) APPLICANT:

- (A) NAME: NESTEC S.A
- (B) STREET: AVENUE NESTLE 55,
- (C) CITY: VEVEY
- (D) STATE OR PROVINCE: VAUD
- (E) COUNTRY: SWITZERLAND
- (F) POST CODE: 1800
- (G) TELEPHONE: 021 924 26 09
- (H) FAX: 021 924 28 80

(ii) TITLE OF THE INVENTION: COFFEE MANNANASE

(iii) NUMBER OF SEQUENCES: 7

(iv) COMPUTER READABLE FORM

- (A) MEDIUM TYPE: Floppy disk
- (B) COMPUTER: IBM PC compatible
- (C) OPERATING SYSTEM: PC-DOS/MS-DOS
- (D) SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)

(2) INFORMATION FOR SEQ ID NO: 1:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 1613 base pairs
- (B) TYPE: nucleotide
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

TTCATTAAAA ATGGCCTTCT CCAGGAGAAG CAATATCAGC AACTTCTCTT GCTGCTTCCT	60
TGTGATCATC GTCTTATCCC TGCATTGCGA AAATCATATA GTTTCTTCTT CTGCTTCGCG	120
CTTTATTCAA ACAAGAGGAA CCCGATTTCGT GTTAGGTGGC TACCCATTTT TTTTCAATGG	180
GTTCAACTCC TACTGGATGA TGCATGTTGC AGCTGAGCCA AGTGAAAGGC ATAAAATTTT	240
CAATGTATTT CGCGAGGCTG CTGCTACAGG GCTTACTGTT TGCCGGACAT GGGCATTTCAG	300
CGATGGTGGC GATCGAGCTC TTCAAATGTC CCCCCGAGTC TATGATGAAC GTGTCTTTCA	360

GGCCCTTGAT	TTTGTGGTAT	CGGAAGCAAG	GAAGTATGGA	GTTCACTTAA	TCCTGAGTCT	420
GACCAACAAC	TACAAGGACT	TTGGAGGAAG	GACGCAATAC	GTGACGTGGG	CTAAAAATGC	480
CGGAGTACAA	GTGAATAGCG	ATGATGATTT	TTACACCAAG	AATGCTGTCA	AGGGATATTA	540
CAAGAATCAC	ATTAAGAAAG	TGTTGACTAG	GATCAACACA	ATCAGTAGAG	TTGCATATAA	600
AGATGATCCA	ACAGTCATGG	CATGGGAGCT	AATAAATGAA	CCTCGTIGCC	AGGTCGACTT	660
CTCCGGAAAA	ACCTTAAATG	CTTGGGTTCA	AGAAATGGCA	ACTTACGTCA	AATCACTCGA	720
TAACAAACAC	CTTCTAGAAA	TAGGCATGGA	GGGATTCTAC	GGAGATTCAA	TGCCAGGCAA	780
AAAGCAGTAC	AATCCTGGAT	ACCAAGTGGG	CACAGATTTT	ATCACCAATA	ATCTTATCAA	840
AGAGATAGAT	TTTGCAACCA	TTCATGCATA	TCCCGATATT	TGGCTGTCTG	GACAGAGCGA	900
CGGTGCACAG	ATGATGTTCA	TGAGAAGGTG	GATGACCAGT	CACTCCACAG	ACTCTAAGAC	960
CATACTTAAA	AAACCATTGG	TTCTCGCTGA	ATTTGGGAAA	TCAAGTAAAG	ATCCAGGATA	1020
CAGTTTATAT	GCCAGGGAGT	CATTCATGGC	CGCAATTTAC	GGTGATATCT	ACAGGTTTGC	1080
TAGAAGAGGA	GGCATTGCAG	GTGGATTGGT	TTGGCAAATC	CTGGCCGAGG	GAATGCAACC	1140
GTACGCAGAT	GGGTATGAAA	TTGTCTTGTC	TCAGAACCCA	TCAACCGGAC	GAATCATAAG	1200
CCAACAGTCT	CGACAAATGA	CTTCACTCGA	CCATATGAGC	AGTAATAGAA	CCAATTCTCA	1260
AAGCAACAAA	CTGCGCAATT	CAAAGGAGCA	GTGATCAGTC	TTCCAGAAAG	TCTACTTGAG	1320
TTTGTTTCGTA	TGTCAAAATC	AAGTATCAAC	CATAGAAATT	TCCATTATAT	TCGGAGTGTT	1380
TTAGTCAAGT	TCTAGTAATA	CCGCTGGAGT	CATGATAGTT	ATGACAGTAA	TACCGCTGGA	1440
GTCAAGTTCT	AGTAATACCG	TTGGAGTCAA	GTTATGATAG	TTATTTAAAA	ATTAGTATTT	1500
TATTACAAAT	TTGTTATTGT	TGTGAGACTT	GTTTATTAAG	TAAATGGAAA	GTCTTATCAT	1560
TATTATCATT	TGAGAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAA	1613

(2) INFORMATION FOR SEQ ID NO: 2:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 427 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: [lacuna]
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

Met	Ala	Phe	Ser	Arg	Arg	Ser	Asn	Ile	Ser	Asn	Phe	Ser	Cys	Cys	Phe
1					5				10					15	
Leu	Val	Ile	Ile	Val	Leu	Ser	Leu	His	Cys	Glu	Asn	His	Ile	Val	Ser
				20				25					30		
Ser	Ser	Ala	Ser	Arg	Phe	Ile	Gln	Thr	Arg	Gly	Thr	Arg	Phe	Val	Leu
				35				40					45		

Gly	Gly	Tyr	Pro	Phe	Phe	Phe	Asn	Gly	Phe	Asn	Ser	Tyr	Trp	Met	Met			
																50	55	60
His	Val	Ala	Ala	Glu	Pro	Ser	Glu	Arg	His	Lys	Ile	Ser	Asn	Val	Phe			
																65	70	75
Arg	Glu	Ala	Ala	Ala	Thr	Gly	Leu	Thr	Val	Cys	Arg	Thr	Trp	Ala	Phe			
																	85	90
Ser	Asp	Gly	Gly	Asp	Arg	Ala	Leu	Gln	Met	Ser	Pro	Gly	Val	Tyr	Asp			
																100	105	110
Glu	Arg	Val	Phe	Gln	Ala	Leu	Asp	Phe	Val	Val	Ser	Glu	Ala	Arg	Lys			
																115	120	125
Tyr	Gly	Val	His	Leu	Ile	Leu	Ser	Leu	Thr	Asn	Asn	Tyr	Lys	Asp	Phe			
																130	135	140
Gly	Gly	Arg	Thr	Gln	Tyr	Val	Thr	Trp	Ala	Lys	Asn	Ala	Gly	Val	Gln			
																145	150	155
Val	Asn	Ser	Asp	Asp	Asp	Phe	Tyr	Thr	Lys	Asn	Ala	Val	Lys	Gly	Tyr			
																	165	170
Tyr	Lys	Asn	His	Ile	Lys	Lys	Val	Leu	Thr	Arg	Ile	Asn	Thr	Ile	Ser			
																180	185	190
Arg	Val	Ala	Tyr	Lys	Asp	Asp	Pro	Thr	Val	Met	Ala	Trp	Glu	Leu	Ile			
																195	200	205
Asn	Glu	Pro	Arg	Cys	Gln	Val	Asp	Phe	Ser	Gly	Lys	Thr	Leu	Asn	Ala			
																210	215	220
Trp	Val	Gln	Glu	Met	Ala	Thr	Tyr	Val	Lys	Ser	Leu	Asp	Asn	Lys	His			
																225	230	235
Leu	Leu	Glu	Ile	Gly	Met	Glu	Gly	Phe	Tyr	Gly	Asp	Ser	Met	Pro	Gly			
																	245	250
Lys	Lys	Gln	Tyr	Asn	Pro	Gly	Tyr	Gln	Val	Gly	Thr	Asp	Phe	Ile	Thr			
																260	265	270
Asn	Asn	Leu	Ile	Lys	Glu	Ile	Asp	Phe	Ala	Thr	Ile	His	Ala	Tyr	Pro			
																275	280	285
Asp	Ile	Trp	Leu	Ser	Gly	Gln	Ser	Asp	Gly	Ala	Gln	Met	Met	Phe	Met			
																290	295	300
Arg	Arg	Trp	Met	Thr	Ser	His	Ser	Thr	Asp	Ser	Lys	Thr	Ile	Leu	Lys			
																305	310	315
Lys	Pro	Leu	Val	Leu	Ala	Glu	Phe	Gly	Lys	Ser	Ser	Lys	Asp	Pro	Gly			
																	325	330
																		335

Tyr Ser Leu Tyr Ala Arg Glu Ser Phe Met Ala Ala Ile Tyr Gly Asp
 340 345 350
 Ile Tyr Arg Phe Ala Arg Arg Gly Gly Ile Ala Gly Gly Leu Val Trp
 355 360 365
 Gln Ile Leu Ala Glu Gly Met Gln Pro Tyr Ala Asp Gly Tyr Glu Ile
 370 375 380
 Val Leu Ser Gln Asn Pro Ser Thr Gly Arg Ile Ile Ser Gln Gln Ser
 385 390 395 400
 Arg Gln Met Thr Ser Leu Asp His Met Ser Ser Asn Arg Thr Asn Ser
 405 410 415
 Gln Ser Asn Lys Leu Arg Asn Ser Lys Glu Gln
 420 425

(2) INFORMATION FOR SEQ ID NO: 3:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 20 base pairs
 - (B) TYPE: nucleotide
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
 - (A) DESCRIPTION: /desc = "SYNTHETIC OLIGONUCLEOTIDE"
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

GGNATGGARG GNTTYTAYGG

20

(2) INFORMATION FOR SEQ ID NO: 4:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 15 base pairs
 - (B) TYPE: nucleotide
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
 - (A) DESCRIPTION: /desc = "SYNTHETIC OLIGONUCLEOTIDE"
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

TTTTTTTTTT TTTT

15

(2) INFORMATION FOR SEQ ID NO: 5:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 17 base pairs
 - (B) TYPE: nucleotide
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
 - (A) DESCRIPTION: /desc - "SYNTHETIC NUCLEOTIDE"
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

AAATCTGTGC CCACTTG

17

(2) INFORMATION FOR SEQ ID NO: 6:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 17 base pairs
 - (B) TYPE: nucleotide
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
 - (A) DESCRIPTION: /desc - "SYNTHETIC NUCLEOTIDE"
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

GTAAAACGAC GGCCAGT

17

(2) INFORMATION FOR SEQ ID NO: 7:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 17 base pairs
 - (B) TYPE: nucleotide
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: other nucleic acid
 - (A) DESCRIPTION: /desc - "SYNTHETIC NUCLEOTIDE"
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

CAGGAAACAG CTATGAC

17

(2) INFORMATION FOR SEQ ID NO: 8:

- (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: [lacuna]

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:

Ser	Phe	Asn	Phe	Val	Lys	Thr	Arg	Gly	Thr	Glu	Phe	Val	Met	Asp	Xaa
1				5					10					15	
Arg	Phe	Leu	Tyr	Leu											
				20											

(2) INFORMATION FOR SEQ ID NO: 9:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: [lacuna]

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

Thr	Trp	Ala	Phe	Ser	Asp	Gly	Gly	Tyr	Arg
1				5				10	

(2) INFORMATION FOR SEQ ID NO: 10:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 17 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: [lacuna]

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:

Glu	Tyr	Asn	Pro	Gly	Tyr	Gln	Val	Gly	Thr	Asp	Phe	Ile	Ser	Asn	Asn
1				5				10						15	

Arg

(2) INFORMATION FOR SEQ ID NO: 11:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 36 base pairs
- (B) TYPE: nucleotide
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid

- (A) DESCRIPTION: /desc - "SYNTHETIC NUCLEOTIDE"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:

GTCTTATCCC TGGATCCCGA AAATCATATA GTTCT

36

(2) INFORMATION FOR SEQ ID NO: 12:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 40 base pairs
- (B) TYPE: nucleotide
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid

- (A) DESCRIPTION: /desc - "SYNTHETIC NUCLEOTIDE"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

GTACTCTGCA GACTTTCTGG AAGACTGATC ACTGCTCCTT

40